

Claims

Sub C1

1. A panel sawing machine comprising: a horizontal table (5) to support at least one panel (30; 3a, 3b) to be cut; at least one movable device (6; 6a) designed to push the panel along the table in a feed direction (F; F2) or in a direction (F1; F3) opposite to this, in such a way as to feed a sawing device (7; 7a) and/or a rotation device (R), said sawing device (7; 7a) being designed to cut the panel (30; 3a, 3b) into two or more smaller boards (31; 4a, 4b) in a direction at right angles to the feed direction (F; F2), the movable device (6; 6a) being equipped with at least one pickup element (16) that holds the rear edge of the panel in position while it is being sawn, the machine being characterized in that the pickup element (16) is mounted on the movable device (6; 6a) in such a way that drive means (36) can move it in a horizontal direction (H) at right angles to the feed direction (F; F2).

Sub C2

2. The machine according to claim 1, characterized in that the pickup element (16) slides in a guide (15) that is integral with the movable device (6; 6a) and at right angles to the feed direction (F; F2).

3. The machine according to claim 1, characterized in that the movable device (6; 6a) is equipped with two or more of said pickup elements (16) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F; F2), at least one of them being mounted on the movable device (6; 6a) in such a way that it can move in direction (H).

Sub C3

4. The machine according to claim 3, characterized in that at least one of the pickup elements, the one labelled (161), is mounted on the movable device (6; 6a) in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device itself.

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5 The machine according to claim 1, characterized in that the movable device (6; 6a) is equipped with two or more of said pickup elements (16, 161) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F; F2), of which at least one (16) is mounted on the movable device (6; 6a) in such a way that it can move in direction (H) at right angles to the feed direction (F; F2), and at least one (161) is mounted on the movable device (6; 6a) in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device itself.

6. The machine according to claim 1, characterized in that the movable device (6; 6a) is equipped with two or more of said pickup elements (16, 161, 162) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F; F2), of which at least one (16) is mounted on the movable device (6; 6a) in such a way that it can move in direction (H) at right angles to the feed direction (F; F2), at least one (161) is mounted on the movable device (6; 6a) in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device itself, and at least one (162) is mounted on the movable device (6; 6a) in such a way that drive means (39) can move it up and down in the vertical direction (Z).

7. The machine according to claim 1, characterized in that the movable device (6) forms part of a panel sawing machine with a single lengthways cutting axis (7) and is equipped with two or more of said pickup elements (16, 161) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F), at least one of which is mounted on the movable device (6) in such a way that it can move in direction (H).

8. The machine according to claim 7, characterized in that at least one of the pickup elements, the one labelled (161), is mounted on the movable device (6) in such a way that drive means

(38) can move it in the feed direction (F) in both directions (K) relative to the movable device itself.

9. The machine according to claim 7, characterized in that the movable device (6) is equipped with two or more of said pickup elements (16, 161) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F), of which at least one (16) is mounted on the movable device (6) in such a way that it can move in direction (H) at right angles to the feed direction (F), and at least one (161) is mounted on the movable device (6) in such a way that drive means (38) can move it in the feed direction (F) in both directions (K) relative to the movable device (6) itself.

10. The machine according to claim 7, characterized in that the movable device (6) is equipped with two or more of said pickup elements (16, 161, 162) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F), of which at least one (16) is mounted on the movable device (6) in such a way that it can move in direction (H) at right angles to the feed direction (F); at least one (161) is mounted on the movable device (6) in such a way that drive means (38) can move it in the feed direction (F) in both directions (K) relative to the movable device itself; and at least one (162) is mounted on the movable device (6) in such a way that drive means (39) can move it up and down in the vertical direction (Z).

11. The machine according to claim 1, characterized in that the movable device (6, 6a) forms part of a panel sawing machine with two cutting axes, a lengthways cutting axis (7) and a crossways cutting axis (7a) related to a movable device (6) and (6a), respectively, each one of which is equipped with two or more of said pickup elements (16, 161) mounted side by side in a horizontal direction (H) at right angles to the feed directions (F) and (F2) respectively, at least one of the pickup elements of each movable device being mounted on the respective movable device (6; 6a) in such a way that it can move in direction (H).

12. The machine according to claim 11, characterized in that at least one of the pickup elements on each movable device (6; 6a), the one labelled (161), is mounted on the respective movable device in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device itself.

13. The machine according to claim 11, characterized in that each movable device (6; 6a) is equipped with two or more pickup elements (16, 161) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F; F2), of which at least one (16) is mounted on the movable device (6; 6a) in such a way that it can move in direction (H) at right angles to the feed direction (F; F2), and at least one (161) is mounted on the movable device (6; 6a) in such a way that drive means (38) can move it in the feed direction (F) in both directions (K) relative to the movable device (6) itself.

14. The machine according to claim 11, characterized in that each movable device (6; 6a) is equipped with two or more of said pickup elements (16, 161, 162) mounted side by side in a horizontal direction (H) at right angles to the feed direction (F; F2), of which at least one (16) is mounted on the movable device (6; 6a) in such a way that it can move in the horizontal direction (H) at right angles to the feed direction (F; F2); at least one (161) is mounted on the movable device (6; 6a) in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device itself; and at least one (162) is mounted on the movable device (6; 6a) in such a way that drive means (39) can move it up and down in the vertical direction (Z).

15. A method for cutting panels in panel sawing machines that comprise: a horizontal table (5) to support at least one pair of panels (3a, 3b, ... 3n) to be cut; a movable device (6; 6a) designed to push the panel along the table in a feed direction (F;

F2) to feed a sawing device (7; 7a) designed to cut the panels (3a, 3b, ... 3n) into two or more smaller boards (40, 41, ... 4N) in a direction at right angles to the feed direction (F; F2), the movable device (6; 6a) being equipped with at least two pickup elements (16a, 16b, ... 16n) that hold the rear edge of each panel in position while it is being sawn, the method being characterized in that:

- the pickup elements (16a, 16b, ... 16n) used to implement it are mounted on the movable device (6; 6a) in such a way that all of them, except one, if necessary, can be moved by drive means (36) in a horizontal direction (H) at right angles to the feed direction (F; F2);
- at least one of the pickup elements (16b...16n-1) is mounted in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device;
- each panel (3a, 3b, ... 3n) is picked up by a pickup element (16a, 16b, ... 16n) and that the pickup element (16b...16n-1) is moved in the feed direction (F; F2) in both directions (K) relative to the movable device in such a way as to position the panels (3a, 3b, ... 3n) so that the lines along which they have to be cut are aligned before they are fed to the sawing device (7; 7a).

16. The method according to the previous claim, characterized in that:

- the pickup elements (16a, 16b, ... 16n) used to implement it are mounted on the movable device (6; 6a) in such a way that all of them, except one, if necessary, can be moved by drive means (36) in a horizontal direction (H) at right angles to the feed direction (F; F2);
- at least one of the pickup elements (16b...16n-1) is mounted in such a way that drive means (38) can move it in the feed direction (F; F2) in both directions (K) relative to the movable device;
- at least one of the pickup elements (16b...16n-1) is mounted in such a way that drive means (39) can move it in a vertical direction (Z);

